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ABSTRACT

Current policies and programs at New Mexico State University pertaining to a projected decline in enrollment are examined, and possible actions that the university might take to meet the changing needs and profile of the future student population are suggested. It is proposed that additional recruitment efforts should be directed toward new student populations and should be built around opportunities in the current and projected job market. In order to help eliminate financial barriers that might cause students to drop out, mini-scholarships to attract part-time students and tuition waivers to attract out-of-state students might be established. Student motivation and desire to remain in college might be increased by improving the existing honors program and by implementation of the Crimson Scholars Program to attract more academically superior students. A comprehensive, formal study of students who come to the university is recommended because no systematic surveys of freshmen have been conducted. The development of new programs and building flexibility into the older ones is another tactic to prevent enrollment decline. Among the possible alternative delivery systems are the following: extended evening and weekend schedules, independent study, time-shortened and time-lengthened degrees, and expansion of off-campus programs. The coordination of placement and demands of the job market and obtaining support for research are recommended, along with establishing an information center to promote evaluation efforts. Supplementary materials, including a freshman questionnaire, are appended. (SW)

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TOWARD FUTURE GROWTH

STRATEGIES FOR NEW MEXICO STATE UNIVERSITY

A White Paper

on the Impact of Enrollment Projections

Report of

The White Paper Committee on Enrollment Projections

Spring 1979

LE 013 487

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ABSTRACT

Projections of enrollment at institutions of postsecondary education were examined at the National, State, and local level with the conclusion that enrollment decline will occur, although the exact degree of decline is uncertain. Various strategies to cope with this problem were considered, with viable alternatives suggested in the areas of recruitment, retention, programs, and placement as well as the possibility of increased research efforts as support to compensate for decreased resources.

The need for a university institutional studies center was identified, as well as the need for continuous comprehensive surveys of students' opinions, needs, and observations upon entering and leaving New Mexico State University.

In summary, it was concluded that enrollment decline can be counteracted through positive modifications in policies and programs to meet the changing needs and profile of the future student population.

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TOWARD FUTURE GROWTH: STRATEGIES FOR NEW MEXICO STATE UNIVERSITY

INTRODUCTION

A general decline in the population of 18 year olds has been identified nationally and will inevitably lead to an enrollment decline in institutions of higher education. The White Paper Committee has examined current policies and programs at New Mexico State University, and suggests some strategies for coping with these changing conditions.

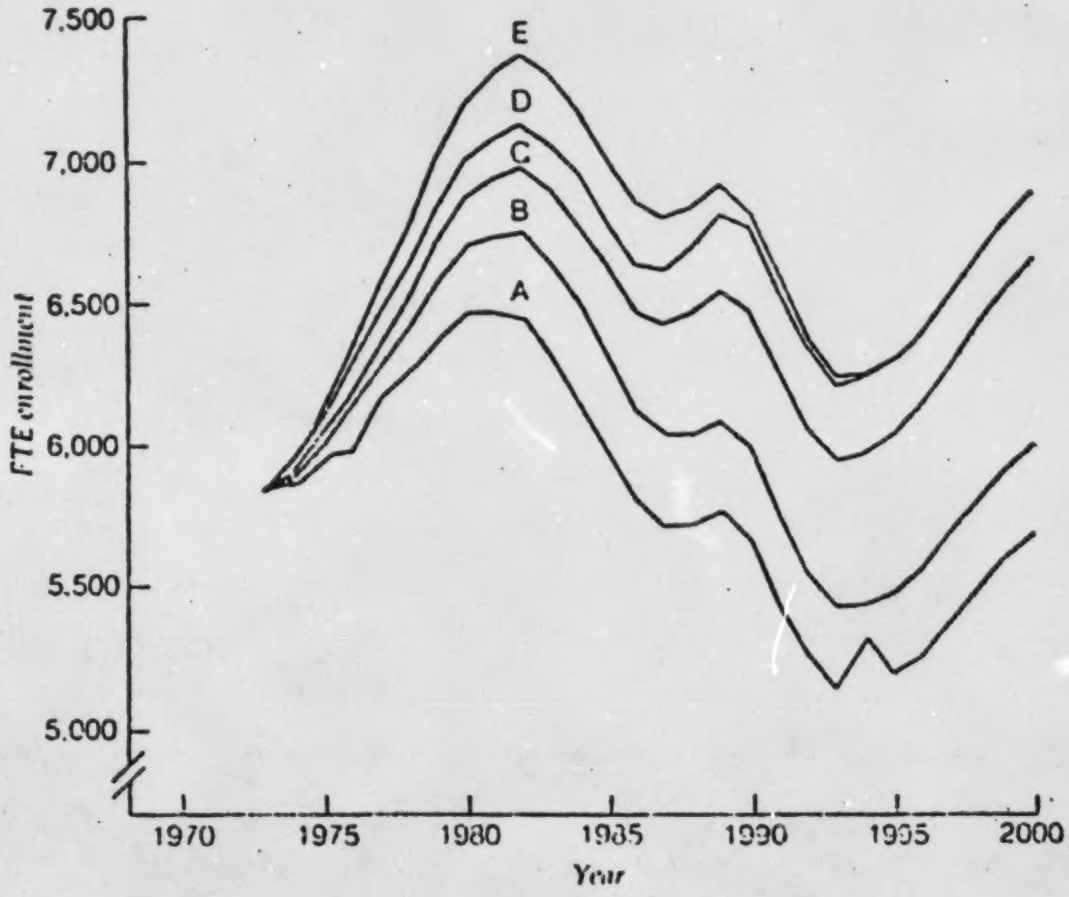
ENROLLMENT PROJECTIONS

Statistics abound in the area of enrollment projections for higher education. At the national level, philosophical statements regarding the status of higher education vary from comparing it to a declining industry such as the railroads to describing it as a vibrant, innovative, and reactive "new" higher education. All projections fall along lines similar to those shown in Figure 1, and range from an 18 percent increase to a 20 percent decrease based on known and forecasted changes in birth rates. (See Appendices A and B for projections of enrollment and 18-year-old population.) Local projections parallel those at the national level. (See Appendix C.) Relatively large fluctuations in enrollment can be anticipated using <u>any</u> of the projections.

From these statistics, it can be concluded that enrollments will decline at NMSU within the next 2 to 10 years. The effect of demographic changes, such as the shift of the population to the Western States and net

FIGURE 1

Projected FTE undergraduate degree-credit enrollment to 2000 under five alternatives (in thousands)



Source: Cartter, A.M. Ph.D.'s and The Academic Labor Market. New York: McGraw-Hill, 1976.

in-migration versus net out-migration, may change the degree to which NMSU is susceptible to the decline. (See Appendix D for a discussion of the demographic factors.) Also, the fact that NMSU plays a role as a community college in this geographical area may mitigate against a decline as great as that experienced by other 4-year institutions.

IMPLICATIONS

An enrollment decline will result in a concomitant reduction in available funds under the current funding formula in New Mexico. Based on an overall 10 percent decline, some possible effects on the level of funding for NMSU, using various enrollment configurations, are shown in Table 1.

The data in this table illustrate the effect of a 10 percent student-credit-hour production decline on NMSU's funding. The only funding included in this illustration is that for instruction, which includes salaries for department heads, faculty, graduate assistants, and support staff. It also includes funding for departmental supplies, travel, and all other departmental noncapital outlay costs related to the instructional mission of the university. The reason for illustrating a reduction in funds in instruction only is that the general fund, which includes operation of the physical plant, could not be reduced in proportion to a decline in enrollment.

In order to show the effect on the university of a change in the mix of students, a uniform decline of 10 percent is shown, along with three other examples which show various declines and increases at the three levels. Funding could also be greatly affected by changes in student interests at each level. For example, if there were a 20 percent decline

TABLE 1

EFFECT OF A 10 PERCENT STUDENT-CREDIT-HOUR PRODUCTION DECLINE ON NMSU INSTRUCTIONAL FUNDING LEVELS, USING VARIOUS MIXES OF LOWER-DIVISION, UPPER-DIVISION, AND GRADUATE STUDENT-CREDIT-HOUR PRODUCTIONS

(Base for SCH production was 1978, and 1979-80 formula weights were used.)

	1978 SCH Production	1979-80 Weights	No SCH Production Change	Overall 10 Percent Decline			
				All Levels Constant	-19.8% LD + 5.0% UD +10.0% GRAD	-13.3% LD - 5.0% UD 0.0% GRAD	-14.3% LD 0.0% UD -20.0% GRAD
Lower Division	177,232	40.29	$ 7,140,677	$ 6,426,618	$ 5,730,124	$ 6,190,841	$ 6,117,714
Upper Division	90,265	73.10	6,598,372	5,938,571	7,005,027	6,268,471	6,598,372
Graduate	13,490	208.10	2,807,269	2,526,642	3,087,996	2,807,269	2,245,815
Totals	280,987		$16,546,318	$14,891,831	$15,823,147	$15,266,581	$14,961,901
$ Change from Base				-$ 1,654,487	-$ 723,171	-$ 1,279,737	-$ 1,584,417
# Faculty[a] Represented by Decline				-74	-32	-57	-71

[a]Based on an average faculty salary of approximately $19,500, plus appropriate fringe benefits.

in education majors and no decline in engineering majors, the monetary impact on the university would be much less than if there were a 20 percent decline in engineering majors and no decline in education majors.

In this table, the data show that, with an overall decline of 10 percent, there would be a decrease in institutional funding of $1,654,487. Because of the branch and junior-college trend, it is assumed that changes at the upper-division level will be minimal. Although it is assumed that graduate SCH production will be fairly constant or will increase, the impact of graduate education is illustrated by the example which shows a 20 percent graduate SCH production decline. Another example illustrates the minimal effect on funding of an increase at the upper-division and graduate levels and a large decline at the lower-division level.

The bottom row of the table shows the effect of a 10 percent SCH production decline on faculty positions, assuming the entire decline was absorbed by cutting faculty positions. An average faculty salary of $19,500 plus appropriate fringe benefits was assumed for the released faculty, resulting in a faculty reduction of 74. Obviously, if senior faculty retire, the actual reduction in numbers would be decreased, but this average was used since newer, lower-paid faculty members would be affected first.

The institutional funding would be affected by changes in students' interests at each level, but in general under the formula, if there were a large decline at the lower-division level, combined with an increase at the graduate level, the effect on funding would be minimal. (See Appendix E for projected shifts by subject area.)

Therefore, the problem to be addressed by members of the university community, given the probable enrollment decline, is the development of strategies to offset the impending decrease. In general, new sources of funds are needed to provide the initial investment required to begin new programs, or to upgrade areas which enhance resource growth. Although the academic core will be retained, the need to modify some programs in order to attract new types of students and resources becomes obvious. The university community must make decisions as to what specific action NMSU should take in order to meet the needs of a changing student clientele. In this light, many alternatives present themselves; some may even become solutions.

ALTERNATIVES

One possible option is to do nothing and accept the decreased enrollment, restructuring the NMSU organization to reflect this change in terms of faculty and staff. The results--smaller classes, a lower student-teacher ratio, and a simpler structure--can appear attractive, but it is not possible to maintain the status quo or to return to a simpler past within the context of a changing world. Even without the threat of enrollment decline, student interests and characteristics have changed significantly in the last 10 years and new programs must be developed to meet their needs. Education can no longer be viewed as a single event or an activity to be embarked upon only during youth; rather, lifelong learning and education during a person's lifetime appear a reality for many. As the general population becomes better educated, a demand for new programs will develop. A new student profile is emerging from the data and literature which depicts the new students as more likely to be

part time, female, minority, and older than was true a few years ago.[1] One can expect that changes in types of students will likewise modify the kind of education that institutions will offer. As noted by one observer:

> I foresee universities increasingly operating as recycling centers, as change resorts, to which people will turn as they go through the major turning points of their lives--whether it be from childhood to adulthood, from being an at-home mother to a working mother, from one career to the next, or from a last career to retirement. The management of change--life change, social change, institutional change--has to be a crucial issue for higher education.[2]

It is apparent that different and new demands will be made of universities in the future as evidenced by enrollment declines, the changing needs of students, and the modification brought about by shifts in program funding within institutions.

Many alternatives are offered in the hope that NMSU can continue to grow, and are directed toward the needs of both traditional and nontraditional students. Briefly, they include:

1. Improved and more appropriate recruitment efforts.
2. Increased retention programs.
3. Alternative delivery systems and additions to existing academic programs.
4. Coordinated placement programs.
5. Support from research.

To ascertain the potential and realized value of each alternative, an institutional studies center is suggested by the committee. In addition, a comprehensive survey of students to provide more information on student opinions, needs, and interests is advocated.

IMPROVED AND APPROPRIATE RECRUITMENT EFFORTS

An effort is being made to attract a greater percentage of traditional New Mexico high school students into higher education. A New Mexico statewide committee has been formed to study the problem, and operating funds are being sought.

Other recruitment efforts should be directed toward the new population of students. (See Appendix F for data on national, local, and branch enrollment from which the new student profile was derived.)

Recruitment efforts at NMSU must also be built around opportunities in the current and projected job market in order to avoid the unethical posture of misleading students. "Some institutions have made false claims to prospective students about the vocational benefits of their programs."[3] Certain programs can be emphasized based on various sources of data. (See Appendix G for information on the current job market.) Observations indicate there will be a viable source of students during the "declining years" if we design our programs to meet their needs. Various universities have developed marketing techniques to reach these potential students; NMSU may wish to do the same. For instance, the institution might publish achievements of students and faculty.

The team approach is essential for effective recruitment, and should involve all members of the university community including alumni, deans, department heads, faculty, housing, student affairs, and various other ancillary departments, in addition to the Admissions Office. Initial contacts by prospective students are made with all these groups, and should be utilized so the student is encouraged to examine NMSU's programs further. Coordinated and rapid follow-up can be the deciding factor in a student's educational choice. For example, faculty members could

participate with the admissions staff in visits to high schools, making special efforts to visit with student leaders and counselors during these visits, and then follow up with individual students who have expressed interest in their disciplines.

INCREASED RETENTION AND DEVELOPMENTAL EDUCATION PROGRAMS

Another solution to foster enrollment maintenance is to increase efforts to keep students in school since an institution's goal is not simply to attract students to the campus, but hopefully to educate them as well. NMSU currently offers a variety of programs designed to improve retention, such as the Drop-In Lab, Counseling Center, and women's and ethnic offices, as well as individual and group advising in the academic colleges. Developmental education (remedial) is also being given a high priority at NMSU. (Estimated costs of some of the current programs are shown in Appendix H.) The effectiveness rendered by these programs is difficult to measure in a quantitative sense, so that statistically valid comparisons of their success are not possible at this time.

In addition to marginal preparation at the high school level, financial barriers caused by inflation can also be cited as reasons for students dropping out. General living costs which accompany education are rising continually, as well as the actual costs of tuition, fees, books, and supplies. In a comprehensive study of the impact of financial aid on attrition, Alexander Astin notes that financial aid is an "important factor in the student's ability to complete college."[4]

The financial aid offered at NMSU is varied. (See Appendix I for some recent reports on NMSU financial aid.) Of approximately 190 scholarships offered, virtually all are actually awarded each year. The

President's Associates has allocated funds for new scholarships which provided financial assistance for 40 students this year. Opportunities for financial aid are also expected to increase under the new provisions of the Basic Educational Opportunity Grants Program. It should be noted that 51 percent of the award recipients are minority students and 53 percent are women, reflecting--to a certain extent--the changing profile of the NMSU student.

Mini-scholarships to attract part-time students and tuition waivers to attract out-of-state students are additional ways recommended by the White Paper Committee to encourage students into higher education. It is suggested that each college launch an effort to increase the number of scholarships and grants obtained from business and industry.

Work-study programs can be expanded. The Astin study showed that work-study programs enhance student persistence, possibly even more than scholarships or grants.[5] The Carnegie Council on Policy Studies in Higher Education has recommended that students be required to contribute to their education from their own earnings in order to receive other aid.[6] The council also recommended that the work-study program be increased on a national basis to $900 million by 1982-83.

There are other indirect ways to help keep students' expenses as low as possible, such as city and university development of bicycle paths, a city mini-bus system, formation of low-cost student cooperatives, and professorial choice of less expensive books.

In addition to developmental programs and finances, another factor affecting retention is student motivation. Although factors that motivate students are not clear, various studies point to supportive family

environment, previous family member participation, and peer relationships as contributing factors. Astin recommends honors programs and credit by examination as ways to increase the level of student motivation.[7]

Efforts are currently underway at NMSU to improve student motivation through the improvement of the existing Honors Program and implementation of the Crimson Scholars Program to attract more academically superior students. The latter will provide opportunities for undergraduate research, curriculum flexibility (freedom of opportunity), competency-based programs, and special attention from faculty and staff for highly qualified students. (See Appendix J for a description of the Crimson Scholars Program.)

Although there are no studies of New Mexico students which indicate factors involved in their decision to pursue postsecondary education, a short survey of NMSU freshmen students was conducted by this committee to obtain some information regarding factors influencing their choice of NMSU. After the responses are analyzed, results will be forthcoming. (See Appendix K for the questionnaire.)

A comprehensive, formal study of students who come to NMSU is strongly recommended by the committee because no systematic surveys of freshmen have been conducted, and available data collected at the high school level are not useful. A formal survey should be taken during summer 1979 or fall 1979, and surveys should be taken on a continuing basis each year thereafter.

Another important factor on the motivation of students is simply the quality of life on campus, suggested in part by Duling's study which showed that students persisted if they had a personal relationship with

a "significant other."[8] For example, the Department of Agricultural Economics and Agricultural Business at NMSU has found that concern with the students' university lives has had a great affect on their persistence. When faculty and staff take time for students and give attention to their personal and academic concerns, students appear to be more highly motivated and more likely to succeed. In the academic arena, faculty attitudes and treatment of students affect their self-concepts, performance, and satisfaction with the education they are receiving. However, changes in the evaluation and promotion system which will properly recognize faculty members who take time for students are imperative. Personnel in all areas of the university--faculty and classified and professional staff--can have a great impact on the student's quality of life while in college, and consequently on the student's decision to remain in school, transfer to another institution, or drop out completely.

A final area closely related to retention concerns the "stop out" or the student who temporarily interrupts his or her college education. The university must develop the expertise to identify these students, pinpoint the reasons for the interruption, and implement measures which will encourage their return to New Mexico State University when they resume their educational careers.

PROGRAMS--TRADITIONAL AND NONTRADITIONAL

The third area in which changes can be brought about in order to prevent enrollment decline is in the area of educational programming. NMSU is already developing the capacity for change by implementing some new programs and building flexibility into the long established ones.

Although traditional programs must be retained and students encouraged to perservere through graduate school, nontraditional programs and alternate delivery systems must also be developed to include some of the following:

1. Extended evening and weekend schedules
2. Uneven entry
3. Independent study
4. Enhanced summer programs
5. Time-shortened and time-lengthened degrees
6. Expansion of funded off-campus programs
7. Specialized programs under contract with private industry.
8. Interdisciplinary efforts

Further study is needed to determine exact costs of these suggestions, but the committee views them as potentially cost effective.

Certain organizations have developed alternate ways of delivering education through off-campus output-based packages. In New Mexico, institutions of higher learning are widely spaced geographically so that some mature people with family, financial, and employment obligations do not have access to on-campus educational degree programs. An output-based program consists of independent learning by highly motivated mature students who are employed in the area of study, unable to get on-campus instruction, and desire a basic professional degree. Therefore, these programs would attract students who would otherwise not participate in higher education and students would not be taken from regular on-campus programs. The viability of this approach is made evident by the fact that over 22 out-of-state institutions offer programs in New Mexico,

indicating that postsecondary educational offerings outside the traditional structure are a demonstrated need. (See Appendix L for examples of the out-of-state institutions.)

Since the system is an output-based program, student success is measured on the basis of performance or demonstration of competency. Students in these programs usually have extensive work experience, and would not always need the full complement of introductory courses. The curriculum is entirely integrated, but requires continuous monitoring by faculty members to combat the frequent criticism that such an approach leads to a low-quality education. A strong relationship with employers of these students could provide a source of funds since companies often sponsor in-house training programs or pay for the employee's tuition at external institutions.[9] Therefore, since NMSU is experienced in the field of education and has expertise in "how to educate," it will be able to accomodate the demands for time-shortened comprehensive degree programs which coincide with time limits of busy working people and offer a better output-based program than the industries are able to offer. The original purposes of the land-grant institution would be rediscovered in a new form.

Faculty resources can be effectively utilized in this type of program, so that costs to the institution can be minimized by maintaining the same faculty and staff size. A group of on-site facilitators drawn from qualified residents of the area would supplement the faculty members' activities. With an investment of fewer actual hours, faculty members would be credited with teaching a substantial course load and thus have more time available to carry out other activities such as research. The

full cost could be recovered in cases where employers are involved, and state funds would not be depleted.

In addition to the output-based integrated packages, alternate delivery systems can be extended to the on-campus programs. Instruction is traditionally offered by lecture. However, alternate approaches such as computer-assisted instruction and contract learning compare favorably with the lecture technique where valid comparisons exist. A review of the literature encourages experimentation with alternative delivery systems where the need for nontraditional instruction exists.[10]

The viability of alternate methods of teaching is supported by many other observations that suggest open education will fulfill the needs of a population that is becoming more generally educated, more mobile, and is desiring more creative and flexible endeavors for personal enrichment and self-fulfillment. The changes in the understanding of man, his interdependence on all other subsystems, and his increased (or newly discovered) capacity to learn will require changes in the way education is offered. The dynamics of society and its continual change does not mesh with structured input-based education.[11] Instead, people will desire (and thus demand) flexible, participatory formats where the instructor becomes the advisor and learning comes from many sources--not just the knowledge possessed by the teacher.

The specific suggestions offered by the White Paper Committee include extending the schedule into evenings and weekends, so that people who are not able to attend full time will still be able to complete a degree. With the expected growth in the numbers of part-time students, the 2- and 4-year degree programs offered entirely on evenings, both on and off campus, would attract students now being bypassed.

A concerted effort to schedule requirements for various degrees so they could be met entirely on weekends or evenings will enable the university to provide for the students it can expect since it will no longer be able to depend on students who can attend morning and afternoon classes. This will require better coordination by the university and a concerted effort by appropriate departments to schedule the courses necessary for students to complete a degree within a reasonable period of time.

Uneven entry into classes would allow a potential student to enroll in spite of the demands of a job, out-of-town travel, or frequent relocation. Students who are not able to enroll in the regular semesters which begin on specific dates in the fall and spring may consider enrolling for a course which begins at midterm and is completed in 8 to 10 weeks. A different way of counting credits or full time equivalent for funding purposes would be required, however.

Independent study should be offered to reach students with no access to on-campus or the output-based programs. Courses are already being offered on television, by newspaper, and by correspondence in institutions in this region. With the improved technology of telephone and video systems, students could also interact with peers and faculty while carrying on independent study.

Summer programs should be enhanced by adding courses from many different fields which are now unavailable in summer. Experimental courses and conferences would give a larger portion of the population its first contact with the campus and higher education. To attract the growing numbers of senior citizens interested in education, a complete

program including housing, courses, and outside activities could be initiated, with our 1980 participation in the national ELDERHOSTEL program a step in that direction. Other universities offer a wide range of extracurricular activities in the summer which make the campus a focal point in the community and attract people (potential students) to campus. For instance, St. Cloud State University in Minnesota has guided tours, organized hiking and boating, on-campus fairs, musical events, plays, and sporting events, and has stimulated a large summer enrollment.

The time-shortened and time-lengthened degree should be made possible by changing the restriction that degree requirements must be completed within a limited time, while maintaining assurances of quality. The germ of this idea is evident in the current move toward continuous registration, credit by examination, credit for ACT scores, and credit for prior experience so that the need for introductory courses for the mature student can be reduced or eliminated. Other universities have started moving toward a 5-year baccalaureate degree.

Off-campus programs with outside funding should be expanded in their present form to reach students for whom the output-based programs are not appropriate in order to attract students to higher education and provide the potential for transfer to on-campus study.

Specialized programs under contract with private industry could be packaged and provided. In addition to the output-based degree which is connected to the students' employers, industry provides another potential market for the offerings of the university. With the need for higher levels of skill in the labor force and continually changing technology, industry will be taking the initiative in upgrading its employees, and already offers many tuition plans. Universities could meet this need.

Consideration should be given to the development of interdisciplinary programs and degrees by all university departments. Such programs cost little to establish and would bolster enrollments in already existing courses.

COORDINATED AND SYSTEMATIC PLACEMENT EFFORTS

In order to relate recruitment, retention, and academic programs toward a perceivable goal, placement activities must be coordinated with the demands of the job market. A system of continual contact with industry based on the data concerning the current job market (also used in recruiting efforts) can be used to "sell" our programs to firms so that they will be encouraged to recruit NMSU graduates.

Extensive coordination of information among the Alumni Office, Placement Office, and all academic departments would aid students in planning their academic programs and vocational goals. Faculty contact with businesses in their fields is also useful, so the organizations will visit the university and recruit its graduates; many of these contacts could be made during professional meetings. Strengthening the cooperative education programs in the university, community, State, and Nation as well as the internship opportunities across campus are viable alternatives to losing students to the labor force.

If institutions of higher education can illustrate a record of appropriate placement and relevance to the field toward which the programs are directed, perhaps students will perceive the usefulness of the education and training offered in this type of institution and enroll. A constant monitoring of these trends in business and government will benefit the institution and the students.

RESEARCH AS A RESOURCE

Existing research has also been suggested as a base from which funds could be provided for the prevention of retrenchment. It will not be possible to continue the same relationships between teaching and research; those social and technological changes which are altering the student profile will also affect the status of research. Evidence of this is seen in the change that government is making in its attitude toward research policy; it is searching for some definite guidelines to direct and utilize most effectively the results of research and development. A review of research shows a shift in emphasis to the fields of geology, marine study, and energy areas, but basic research in all the disciplines will continue to play a role. Various writers and commissions warn that research expenditures are falling in real terms and are being directed toward applied topics rather than basic research.

An analysis of federal, state, private, and other research support at NMSU shows that over the last 5 years the total research funding has been around 65 percent of funding for instruction and general. (See Appendix M for a comparison of I&G to research support.) Extrapolation of this trend shows a decrease in research support in 1988 if the potential enrollment drop creates a decrease in the instruction and general budget.

Staff members in the NMSU research centers were interviewed to obtain their perception relative to the trends at NMSU. Various constraints to research growth were cited and the likelihood of growth in the face of enrollment declines was seen as small. (See Appendix N for a summary of their comments.) There was a consensus that research support will be shifting toward applied and practical research, and a need was

expressed for qualified and talented graduate students in any effort to increase research. On the other hand, growth was seen as possible if a multi-pronged attack by faculty, staff, and the educational system were made.

At the present time, research efforts support many positions which would otherwise not exist. Therefore, the committee encourages proper changes in the existing constraints such as lack of space and outdated facilities and the development of incentives for faculty to seek research monies.

INSTITUTIONAL STUDIES CENTER

Efforts on the part of committee members to obtain specific costs and comparative data for various programs has emphasized the need for a university data gathering and evaluation center. The establishment of such a center is strongly recommended. Accountability mechanisms need to be established, current programs need evaluation, and data on students must be collected and analyzed. A professional evaluator could coordinate the data gathering so that meaningful figures are available and appropriate comparisons could be made. In addition, information about proper data to be gathered and evaluation methods could be provided to cognizant faculty and staff.

These activities would be the basis for rational assessment of strengths and weaknesses and of changing student needs. With an institutional studies center, a permanent mechanism to monitor change would be built into the university structure. The direction of change is difficult to predict, but certain indicators would be available if appropriate data are obtained and analyzed.

CONCLUSION

In conclusion, the support of the university community is needed if management of the inevitable changes is to result in maintaining the health of the institution and harmony among its members. Some suggestions have been advanced in the areas of recruitment, retention, programs, and placement and the suggestion made that research dollars should be sought to offset decreased funding by the State. We are not suggesting the elimination of current programs, but rather an examination of their current status, along with the development of new programs and new options to meet the challenges of a changing world.

We recommend a positive approach, one that is oriented to the future and that emphasizes rational thinking and action, not just speculation. The reasons are obvious: There is mounting evidence for the possibility that all people have a far greater capacity to learn than has been realized in the past; the quantity and complexity of knowledge grows exponentially, and there is growing demand for a skilled labor force and sophisticated citizenry, as leisure and affluence seem to increase all around us.

The committee has tried to present as many possibilities as literature, educational practice and thought, current conditions, and forecasts indicate. We must accept the challenge of developing and delivering better programs for life-long education. It is apparent that important decisions need to be made regarding the shape and texture of the education which will be offered at NMSU in the years ahead. The best solutions will be found if all members of the university community become involved in the dialogue.

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[1]The Carnegie Foundation for the Advancement of Teaching, More Than Survival (San Francisco: Jossey-Bass Publishers, 1975).

[2]Ellen Goodman, "Lives in Transition; The New Middle Ground," in Current Issues in Higher Education, National Conference Series (American Association of Higher Education, 1978).

[3]Malcolm G. Scully, "Can Colleges Keep Their Integrity As Times Get Harder?", 28 (April 9, 1979).

[4]Alexander Astin, Preventing Students From Dropping Out (San Francisco: Jossey-Bass Publishers, 1975).

[5]Ibid.

[6]"Carnegie Council's Recommendations on Federal Student-Aid Programs," The Chronicle of Higher Education, 18 (March 26, 1979).

[7]Astin.

[8]John Duling, Retention Study Abstract, New Mexico State University, 1975.

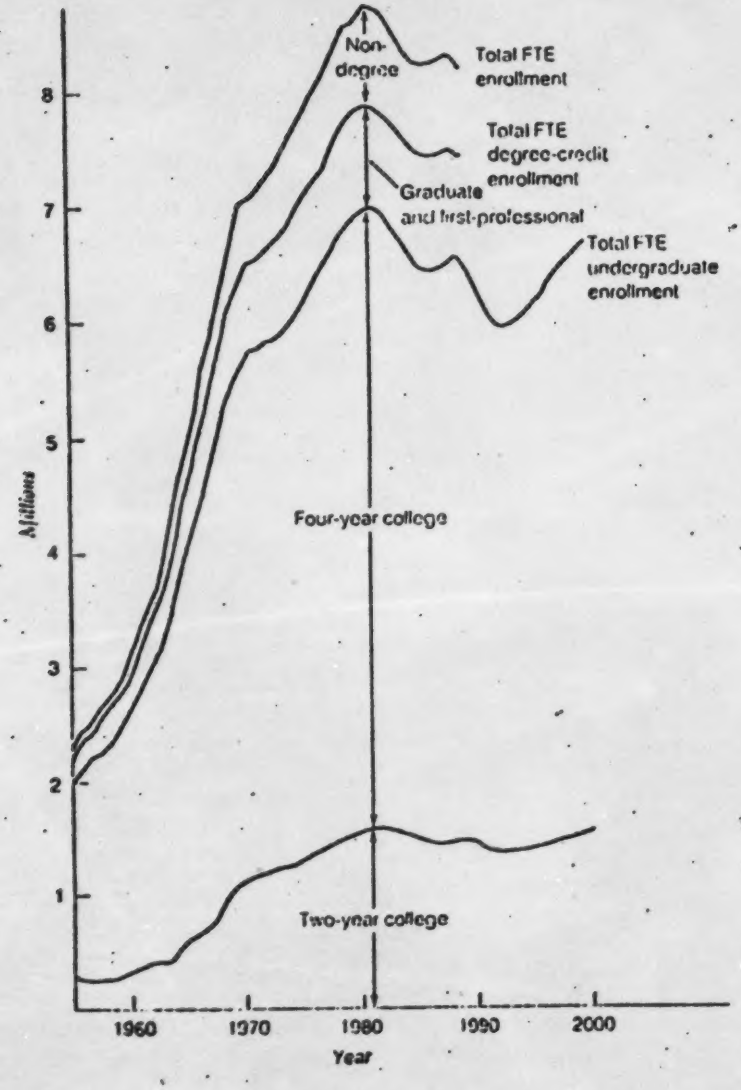
[9]Cathy Henderson and Janet C. Plummer, "Adapting to Changes in the Characteristics of College-Age Youth," Policy Analysis Service Reports, 4 (December 1978).

[10]Thomas E. Cyrs and Donald M. Boehnker, "Empirical Support of Alternative Delivery Systems for Non-Traditional Programs," New Mexico State University, 1978. (Unpublished.)

[11]Michael Marien, "The Basic, Long-Term Multifold Trend in Education," The Futurist, December, 1970.

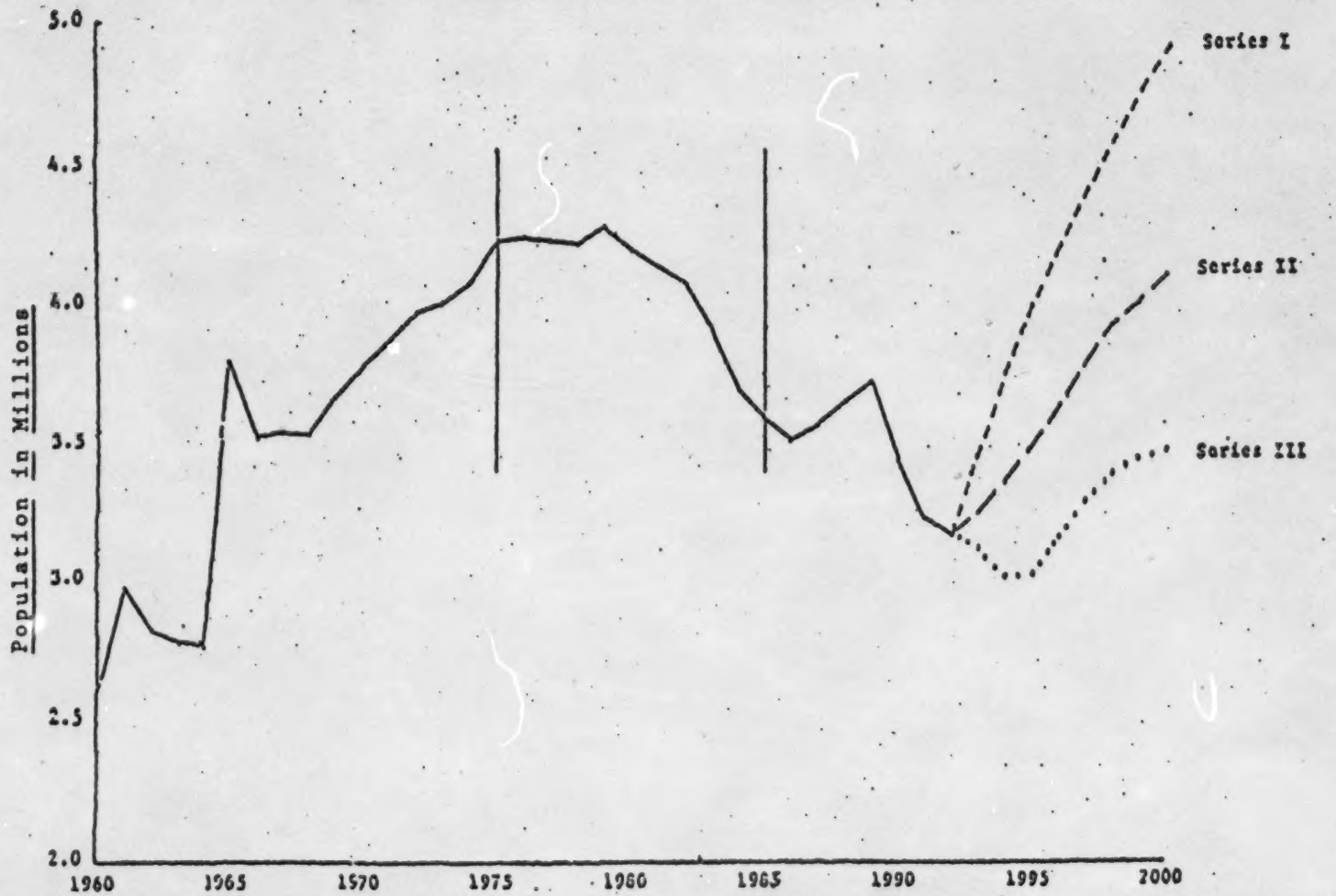
APPENDIX A

Actual and Projected FTE Enrollment



Source: Cartter, A. M., Ph.D.'s and the Academic Labor Market (New York: McGraw-Hill, 1976).

ESTIMATES OF THE 18-YEAR-OLD POPULATION OF THE UNITED STATES: 1960-2000[a]



[a]As of July 1 of each year.

Note: Bureau of the Census Series I, II, and III are based on projections of the average number of lifetime births per women as follows: Series I 2.7, Series II 2.1, and Series III 1.7.

Source: U.S. Bureau of the Census, Current Population Reports, Series P-25, Nos. 519 and 601.

Source: Frankel, M. M. and Sonnenberg, W. C., "Enrollment," in Projections of Education Statistics to 1986-87, edited by M. M. Frankel (Washington: National Center for Education Statistics, 1978).

APPENDIX C

NEW MEXICO STATE UNIVERSITY

Report of

COMMITTEE TO PROJECT ENROLLMENTS

1979-1988

1950-1978 Data Base

November 1978

Committee:

Richard Helbock
R. W. Shipe
William Bruner
Morris D. Finkner, Chairman

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Table 1. Linear Regression of Percent of Potential College Population Attending Public Institutions on Years.

Year	X_0	X_2
1950	0	18.2
1955	5	19.5
1960	10	28.6
1965	15	40.7
1966	16	39.9
1967	17	38.5
1968	18	41.5
1969	19	43.9
1970	20	43.6
1971	21	44.6
1972	22	43.8
1973	23	42.8
1974	24	44.2
1975	25	47.1
1976	26	46.7
1977	27	45.3
1978	28	43.8

X_0 = Coded Year (Year - 1950)

X_2 = Percent of Potential College Population Attending Public Institutions (1950-1978)

$\hat{X}_2 = 19.57 + 1.076X_0$ $\qquad r^2 = .8769$

Table 2. Multiple Regression for Projecting Fall Term Head Count at NMSU.

Year	Years of Birth	X_1	X_2	Y
1950	1929-32	48,176	18.2	1454
1955	1934-37	52,703	19.5	2084
1960	1939-42	57,874	28.6	3315
1965	1944-47	69,300	40.7	5768
1966	1945-48	74,234	39.9	6115
1967	1946-49	80,548	38.5	6807
1968	1947-50	84,183	41.5	7356
1969	1948-51	86,463	43.9	7608
1970	1949-52	91,417	43.6	8155
1971	1950-53	94,808	44.6	9075
1972	1951-54	98,535	43.8	9221
1973	1952-55	101,875	42.8	9199
1974	1953-56	102,777	44.2	9673
1975	1954-57	105,220	47.1	10649
1976	1955-58	108,469	46.7	11184
1977	1956-59	112,740	45.3	11423
1978	1957-60	117,085	43.8	11605

X_1 = Potential College Population (1950-1978)

X_2 = Percent Attending Public Institutions (1950-1978)

Y = Fall Term Head Count—NMSU (1950-1978)

$\hat{Y} = -5753 + 0.123X_1 + 68.39X_2$ $\quad R^2 = .9947$

Table 3. Projected Fall Term Head Count, 1979-1988.

Year	X_1	X_2	$\hat{Y}$
1979	119,640	50.77	12407
1980	120,168	51.85	12546
1981	117,802	52.93	12329
1982	113,917	54.00	11925
1983	108,139	55.08	11290
1984	101,276	56.15	10520
1985	94,699	57.23	9787
1986	88,183	58.31	9061
1987	85,713	59.38	8831
1988	85,136	60.46	8834

X_1 = Potential College Population.

X_2 = Percent of potential college population as projected based on data from 1950-1978.

$\hat{Y} = -5753 + 0.123X_1 + 68.39X_2$

Table 4. Confidence Intervals for Projected Fall Tarm Head Count.

80% Confidence Intervals

Year	$\hat{Y}$	Lower Limit	Upper Limit
1979	12407	12036	12778
1980	12546	12174	12917
1981	12329	11958	12700
1982	11925	11550	12300
1983	11290	10900	11679
1984	10520	10103	10938
1985	9787	9331	10242
1986	9061	8560	9562
1987	8831	8301	9360
1988	8834	8285	9383

90% Confidence Intervals

Year	$\hat{Y}$	Lower Limit	Upper Limit
1979	12407	11915	12899
1980	12546	12053	13038
1981	12329	11838	12821
1982	11925	11428	12422
1983	11290	10774	11806
1984	10520	9967	11074
1985	9787	9183	10391
1986	9061	8396	9725
1987	8831	8129	9533
1988	8834	8106	9561

Table 5. Linear Regression of Entire Year FTE on Fall Term Head Count.

Year	Y	Z
1955-56	2084	2111.95
1956-57	2181	2156.13
1957-58	2293	2301.89
1958-59	2515	2524.27
1959-60	2862	2754.85
1960-61	3315	3165.94
1961-62	3696	3527.39
1962-63	3986	3794.90
1963-64	4253	4128.44
1964-65	4853	4720.04
1965-66	5768	5553.61
1966-67	6115	5961.03
1967-68	6807	6503.81
1968-69	7356	7017.43
1969-70	7608	7490.37
1970-71	8155	8103.67
1971-72	9075	8886.69
1972-73	9221	9105.77
1973-74	9199	9085.57
1974-75	9673	9488.17
1975-76	10649	10321.02
1976-77	11184	10277.45
1977-78	11423	10597.97

Y = Fall Term Head Count (1955-1977)

Z = Entire Year FTE (1955-1977)

$\hat{Z} = 103.11 + 0.95104Y$ $\qquad r^2 = .9967$

Table 6. Projected Entire Year FTE, 1978-88.

Year	$\hat{Y}$	$\hat{Z}$
1978	11605	11139.93
1979	12407	11902.77
1980	12546	12034.66
1981	12329	11828.65
1982	11925	11444.63
1983	11290	10840.24
1984	10520	10108.52
1985	9787	9410.84
1986	9061	8720.28
1987	8831	8501.48
1988	8834	8504.35

$\hat{Y}$ = Projected Fall Term Head Count (1950-78 Data Base).

$\hat{Z}$ = Projected Entire Year FTE (1950-77 Data Base).

APPENDIX D

DEMOGRAPHIC FACTORS AND ENROLLMENT

Concerns about the local projections include the apparent disregard of in-migration, especially in reference to what many feel will be a large snow-belt to sun-belt move. While not explicitly shown in the projection formula, it has not been totally disregarded. Two factors are primary to the local projection: (1) the number of births in New Mexico 18 to 21 years ago; and (2) the number of present 4-year public institution students expressed as a percentage of the first factor (the number of births). Obviously, the first factor does not incorporate in-migration (unless the birth was to an in-migrant). In-migration, as recent as the previous year, does appear through incorporation in the second factor (as do many other nonexplicit factors).

Admittedly, no projection is certain; the future is too unpredictable. But, within the constraints of all such projections, the local committee's (The Committee to Project Enrollments) effort does seem to indicate a trend similar to others done at the national level. (See Appendix C.) It must be remembered that these projections are based on certain assumptions of relatively constant factors. For instance, the ratio of full-time to part-time students is assumed to stay constant. National data seem to indicate that total student enrollment will grow faster than FTE (full-time equivalent) over the next 10 years.[1]

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[1] M. M. Frankel and W. C. Sonnenberg, "Enrollment," in Projections of Education Statistics to 1986-87, ed. M. M. Frankel (Washington: National Center for Education Statistics, 1978).

An article in The Futurist shows the projection that more than half of the U.S. population will live in two huge urban regions by the year 2000.[1] A Los Alamos scientist predicts that by the 1980's, there will be a shift in population to the Western States.[2] Other evidence of shifting population shows an inflow to the west.[3] At the national level, the American Association of Collegiate Registrars and Admissions Officers is undertaking a survey to delineate student migration patterns.

As far as projections regarding in-migration specific to New Mexico are concerned, new evidence shows that New Mexico is no longer considered to have high in-migration.[4] A recent study indicates that we can expect a net out-migration of 1.35 percent of freshmen from 1975 to 1985.[5] Historically, New Mexico has been a net exporter of freshmen students. The statistics do not incorporate any of the often-mentioned explosive spurts of in-migration that some people expect for southern New Mexico. Whether or not these spurts will exceed those that are already incorporated into the statistical model, through the second factor (the percentage of students of the number of births), is rather a moot point. We just will not know until, and if, it happens.

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[1]"By the Year 2000: Half of U.S. People May Live in Two Urban Regions," The Futurist, December, 1972.

[2]"Swing in Population Likely to Shift Power," Los Alamos Monitor, 24 January 1979.

[3]"How the States are Growing," U.S. News and World Report, 22 January 1979, p. 6.

[4]"Inbound Movers to State Overstated?", Las Cruces Sun News, 12 April 1979, sec. C, p. 1.

[5]Cathy Henderson, "Changes in Enrollment by 1985," Policy Analysis Service Reports, American Council on Education, 3 (June 1977).

PERCENTAGE DISTRIBUTION OF EARNED DEGREES BY AREA AND LEVEL

Year	Social Science	Psychology	Humanities	Math	Computer Science	Engineering	Physical Sciences	Biology	Agriculture	Business	Education	Total # of Degrees
1975-76 (Actual)												
Bachelor's	14.0	5.4	15.1	1.7	0.6	5.0	2.3	5.9	2.1	11.6	16.7	925,746
Master's	5.4	2.5	9.5	1.2	0.8	5.2	1.8	2.1	1.1	12.8	41.0	311,771
Doctor's	12.7	7.6	12.4	2.5	0.7	8.3	10.1	10.0	2.7	2.6	22.8	34,064
1986-87 (projected)												
Bachelor's	12.6	5.4	13.8	1.5	1.2	7.0	2.2	7.0	2.2	11.8	11.9	979,000
Master's	2.4	3.1	9.2	1.0	1.5	3.7	1.3	1.8	1.0	14.6	42.8	439,400
Doctor's	13.3	8.3	11.8	2.0	1.1	5.9	7.8	8.3	1.9	3.1	27.6	42,200
Change												
Bachelor's	-1.3	0	-1.3	-0.2	+0.6	+2.0	-0.1	+1.1	+0.1	+0.2	-5.8	+53,254
Master's	-3.0	+0.6	-0.3	-0.2	+0.8	-1.5	-0.5	-0.3	-0.1	+1.8	+2.8	+127,629
Doctor's	+0.5	+0.7	-0.6	-0.5	+0.4	-2.4	-2.3	-1.7	-0.8	+0.5	+4.8	+8136

Source: Frankel, M. M. and Sonnenberg, W. C. "Enrollment," in Projections of Education Statistics to 1986-87, edited by M. M. Frankel (Washington: National Center for Education Statistics, 1978).

APPENDIX F

PROJECTIONS OF STUDENT CHARACTERISTICS

Several writers and organizations have drawn up a new profile which depicts the student population as consisting of more part-time students, women, minorities, and older persons. The Carnegie Commission based their optimistic projection on increases in part-time students, nondegree students, older students, and graduate students.[1] Edwin Allen in a discussion of education and work shows that the numbers of female, adult, and part-time students are increasing.[2] The future of life-long education and the resulting change in the make-up of the student population is emphasized by various writers.

The data on national enrollment support this forecast. Statistics from the National Center for Education Statistics for fall 1978 enrollment show the above types of changes occurring already. From fall 1977 to fall 1978, there was an overall increase in women of 1.6 percent and a 3.1 percentage increase in the number of part-time students. Decreases occurred in freshmen of 1 percent, in full-time students of 1 percent, and in male enrollment of 1 percent.

NMSU student data also show these changes, although a clear trend is not indicated in the changes from fall 1977 to fall 1978. The changes over a 4-year period from fall 1974 to fall 1978 are clearer.

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[1] The Carnegie Foundation for the Advancement of Teaching, More Than Survival (San Francisco: Jossey-Bass Publishers, 1975).

[2] Edwin Allen, "Education and Work: A Growing Partnership," TrendReport, 1.

TABLE I

SHIFTS IN ENROLLMENT AT NMSU

Category	1-year Shift Fall 1977-Fall 1978	4-year Shift Fall 1974-Fall 1978
Part time	- 1.4%	--
Full time	+ 1.4%	—
Women	+ .5%	+ 4.0%
Men	- .5%	- 4.0%
Freshmen	- 6.9%	+ 4.0%
Older (over 35)	+ .6%	+ .8%
Minorities	- .6%	+ 4.6%

These shifts show that at NMSU, we are already experiencing increases in the number of women and older students. Although the numbers of minority students decreased from 1977 to 1978, the 4-year trend shows a sharp increase. While the proportions of part-time and full-time students have remained constant thus far, the number of freshmen dropped considerably in the last year. Review of this type of data is essential to ascertain the longitudinal trends in types of students. The university needs to be continually aware of the changing profile of students, so that their needs will be met. After these students are identified, publicity about NMSU can be designed to attract their attention and direct it toward the programs which are designed around their needs and backgrounds.

Data on the students on the branch campuses also illustrate the modification of the student population in the direction of the new profile, and is included here to demonstrate that cognizance of this information will provide an avenue for offsetting enrollment decline.

Any strategies for growth for New Mexico State University should include the university's five branch campuses. Table II shows the overall increase in branch headcount for fall semesters beginning with fall 1975. The overall increase has been consistent even though individual branches have shown some fluctuation. Several factors account for this increase. Tuition costs are remaining at an affordable level. Students can live at home and maintain employment while going to college. The branch campuses are becoming more comprehensive in their offerings at the lower division and vocational-technical offerings. These factors are substantiated by the number of students enrolling at the branches as first-time college students as reflected in Table III.

TABLE II

CREDIT HEADCOUNT BY BRANCH CAMPUS

Fall Semester 1975-1978

Branch	1975	1976	1977	1978
Alamogordo	928	1009	1099	1133
Carlsbad	563	485	520	512
Dona Ana	307	459	533	443
Grants	343	378	372	409
San Juan	808	903	986	1218
W.S.M.R.	217	138	210	210
TOTAL	3166	3372	3720	3925

TABLE III

Number of Branch Students Enrolling for First Time
Fall Semesters 1975-1978

Branch	1975	1976	1977	1978
Alamogordo	282	257	296	319
Carlsbad	162	141	149	157
Dona Ana	25	136	130	124
Grants	125	109	116	155
San Juan	243	264	269	378
W.S.M.R.	57	27	44	47
TOTAL	894	934	1004	1180

Given current economic conditions, the increasing comprehensiveness of branch programs, and the availability of modern physical plants on all branch campuses, it is believed branch enrollments will continue to grow during the foreseeable future.

Many students attending the branches are typical young high school graduates taking freshman and sophomore courses as well as vocational-technical education. However, many branch students are very different than their 18-20 year old counterparts. They are different because they are older and have experience. They attend part time; they have their own lives away from school. Increasingly, they are women and minorities. They are attending college not because it is an established pattern of behavior, but because they want to learn something. Many want to earn a degree or advance in their jobs.

While a share of the branch students do not continue their education beyond what is available at a branch campus, this is not true for all branch students as indicated in Table IV. The data in this table show that more than 1000 students enrolled at a branch and later changed to the main campus during the

three and a half year period fall 1975 through fall 1978. These data do not include Dona Ana Branch students because Dona Ana Branch programs are vocational-technical in nature culminating in a certificate at the completion of one year or an associate degree upon finishing two years. Data were not available for those students who completed or exited a Dona Ana Branch program and pursued a program on main campus.

TABLE IV

STUDENT COMING FROM BRANCH TO MAIN CAMPUS BY COLLEGE
Fall Semester 1975-1978

	Alamogordo	Carlsbad	Grants	San Juan	WSMR	Total
AG & HOME EC	40	14	19	41	3	117
A & S	178	48	22	88	25	361
BA & ECON	89	26	21	29	16	181
CONT. EDUC.	28	13	3	11	37	92
EDUCATION	85	37	15	32	2	171
ENGINEERING	66	23	12	35	9	145
TOTAL	486	161	92	236	92	1067

The college of Arts and Sciences was the greatest benefactor of students changing to main campus. However, all colleges benefitted from these changes. Students who have completed all course work available to them at a branch represent a viable source of students for the main campus.

Data were not readily available for the number of students who attended a branch then transferred to a college or university other than main campus. It would seem to be an advantage to the university to determine the number of students who began college at a branch and later transferred to another college or university. This group may represent a signficant pool of potential students.

On the basis of the preceding information plus the fact that the five branch campuses are an integral part of a university system and represent a significant share of the total university enrollment, it appears that several recommendations are in order. These recommendations are as follows:

1. Steps to promote increased understanding of branch campus programs and vice versa should be launched at the college and departmental level. Examples which could enhance understanding include:

   a. the development of a faculty exchange program on a short-term basis between the branches and the main campus;

   b. increased efforts to export cultural and extra-curricular programs to the branches;

   c. increased visitation to branches by department heads and faculty; and

   d. greater involvement of branch faculty in in-service activities conducted at the departmental level.

2. A cooperative effort should be initiated to develop recruitment information such as brochures, films, slides, and news releases, which depict opportunities for students to begin their post secondary education at a branch and complete on main campus.

3. The development of recruiting techniques should be a cooperative effort and shared mutually by branch and main campus personnel.

4. Involvement of appropriate branch personnel in workshops, conferences, and seminars concerning recruitment, financial aids, retention, and placement should be continued.

5. Efforts to develop, refine, and improve registration procedures which will encourage branch students to attend main campus should be continued.

6. The number of students who complete work at a branch and transfer to an institution other than New Mexico State University should be determined. This information should be useful in encouraging more students to attend main campus.

7. The availability of scholarships and work/study opportunities for branch students who need financial aid to attend main campus should be continued and expanded if possible.

8. Main campus and branch personnel should continue to cooperate in the development and implementation of educational programs which incorporate the philosophy of a "career ladder". This will encourage students who attend a branch campus for specific programs to complete their program on the main campus. Examples of current programs using this concept at the branches include nursing, the electro-mechanical option in engineering technology, and the education paraprofessional program. Opportunities exist for development of carefully articulated programs of this nature in all of New Mexico State University's colleges.

APPENDIX G

RECRUITMENT AND THE JOB MARKET

The trend of life-long learning has become a real market. As President Thomas writes:

> One very important aspect of 'diversity' in university programs is the concept of life-long education. The complexities of science and technology, and the increasing social, political, and economic interactions of the world's expansion of knowledge, even an expert engineer will become obsolescent in his field in less than 10 years without constant exposure to continuing education. No one is ever completely educated. Education is a life-long process. We must be completely exposed to programs of continuing education in our speciality as well as other programs for enrichment.[1]

The increase of older people in education as a result of the activism of "senior citizens" is noted.[2] The jobs of the future will be temporary and people will expect to change careers several times. Therefore, to find purpose and lifetime occupation, people will look to education for their definition of self.

Foreign students also make up a viable group toward which recruiting efforts could be directed. At a conference sponsored by the Association of American Colleges entitled "Trends: 2000," illegal aliens were considered as possible potential students if the immigration laws are changed.[3] The needs of foreign students from the People's Republic of China have been made apparent as a result of the United States' changing relationship with that Nation.

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[1]Gerald W. Thomas, "Why Limit Our Horizons in the Land of Enchantment?", A Position Paper presented to the Board of Educational Finance Meeting in Portales, New Mexico, June 21, 1974. (Unpublished.)

[2]Regina M. J. Kyle, "Planning for the 80's, Part II or Who Are Your 'New Students'--What Can You Offer Them?", TrendReport, 1.

[3]Peggy Elder, "Notes from 'Trends: 2000'," December 22, 1978. (Unpublished.)

Another type of student toward which recruitment attention can be directed is the part-time student whose interests cover the entire spectrum of the disciplines. As enrollment data have shown, this type of student is already on the increase. Edwin Allen has pointed out another aspect of the changing student in that 50 percent of undergraduates are not dependent on their families, and that fully half of the student population is also in the labor force. This is compared to 35 percent who were not dependent on their families in 1967.[1] Therefore, the desire for continuing education is growing, with strong emphasis on the connection between education and work. New Mexico State University could, in response, expand the offerings of the branches as well as those on campus to meet this need.

In this light, there are skilled laborers and professional people who are interested in improving and upgrading their skills. The College Placement Annual projects a continued shift from blue-collar to white-collar occupations with rapid growth expected in the manager and administrator category--an increase of 21 percent by 1985. "The demand for salaried managers will continue to grow rapidly as firms increasingly depend on trained management specialists, particularly in highly technical areas of operation."[2]

The job market indicators provide the basis for emphasizing certain programs in recruitment efforts. Amara outlines the effect of energy and technological advances.[3] The basic industries will give way to service

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[1]Edwin Allen, "Education and Work: A Growing Partnership," TrendReport, 1.

[2]College Placement Annual, 1978-79.

[3]Roy C. Amara, "Some Features of the World of 1994," The Futurist, June, 1974.

organizations and multinational corporations. Strom projects that "15 percent of the population will be able to provide all necessary goods and services."[1]

The College Placement Annual attempts to be more specific as to where the jobs will be by 1985. As mentioned above, managers and administrators will be in demand. Professional and technical workers are expected to increase by 18 percent. Clerical workers are described as the fastest growing group with employment expected to rise 20 percent in the next 6 years. Service workers are the next highest group. Sales and craft work will also be a growing employment field. Craft workers are highly skilled workers (e.g. carpenters, instrument makers, electricians, and automobile mechanics), and will increase in most areas except in the railroad industry. The group described as "operatives," which includes packers and truck drivers, are expected to increase 17 percent in employment.

Bureau of Labor statistics indicate some professions that are expected to have growth in the number of jobs as well as good prospects. These professions are: Doctors, veterinarians, systems analysts, dentists, geologists, actuaries, personnel administrators, city managers, engineers, and pharmacists. The professions that will be on the decline by 1985 are: Schoolteachers, librarians, clergymen, foresters, newspaper reporters, hotel managers, college professors, military officers, biologists, and lawyers.[2]

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[1]Robert Strom, "Education for a Leisure Society," The Futurist, April, 1975.

[2]"Professions with Promise," Money, November, 1977.

Some specific outlooks for New Mexico were found in New Mexico Occupational Manpower Needs to 1985.[1] Growth is expected to occur in "mining, manufacturing and trade, while the greatest number of jobs will be found in the trade, services, and government sectors."

NMSU should utilize this type of information to formulate its recruitment programs so that students interested in various fields of study can effectively plan their academic programs and goals.

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[1]"General Employment Changes and Assumptions," New Mexico Occupational Manpower Needs to 1985, NMSU Placement Office.

APPENDIX H

EXAMPLES OF COSTS OF RETENTION PROGRAMS

The retention programs at New Mexico State University vary from centralized programs to efforts by each academic college. For instance, the Colleges of Agriculture and Home Economics and Education use the personal advisement system and make an effort to steer students on the lower end of the ACT scale into proper courses. The College of Engineering sponsors a tutorial program in which students contribute their time, and for each hour of student tutoring, $1 is given to the student's organization. COPE, the Honors Program, the math remedial program, and an advising center are all located in the College of Arts and Sciences. The centralized programs include the Drop-In Lab, the Counseling Center, and the ethnic programs.

Some figures are available to illustrate the funding levels of these varied programs; however, they vary as to reliability. Some approximate totals for 1978 are:

Advising Center	$ 18,000
COPE	47,000
Honors Program	10,820
Drop-In Lab	79,920
Special Student Services	113,940
Counseling Center	106,348
Placement Office	83,874
Counseling and career guidance total	433,139
Black Programs	59,100
Chicano Affairs	59,000
Native American Studies	37,294

APPENDIX I

TOTAL STUDENT AID DISBURSED IN 1977

January 1, 1977 - December 31, 1977

Program	Amount	Number of Students	Average Amount per Student per Program
National Direct Student Loans	$ 990,285	1,035	$956.80
Supplemental Educational Opportunity Grants	381,976	839	455.28
College Work Study Program	701,933	792	886.27
Scholarships & Grants-in-Aid	917,429	1,513	606.36
Federally Insured Loan Program	70,276	81	867.60
New Mexico Student Loan Program	707,450	1,037	682.20
Law Enforcement Assistance Program	14,374	74	194.24
Basic Educational Opportunity Grants	2,959,181	3,307	894.82
Nursing Loans	13,844	46	300.95
Nursing Scholarships	7,050	31	227.41
New Mexico Student Incentive Grants	52,720	232	227.24
TOTAL	$6,816,518	8,987	

SUMMARY OF FINANCIAL AID AWARDED THROUGH FOUR MAJOR PROGRAMS*

July 1, 1977 - June 30, 1978

Ethnicity Or Sex	Number of Recipients	Total Award	Percent of Aid	Fall 1977 Percent of Total Enrollment
Black	104	$ 86,016	3.3	1.8
Indian	130	128,284	4.9	1.8
Hispanic	1,405	1,119,116	42.8	24.9
Other	1,818	1,275,463	48.8	71.0
Women	1,930	1,392,437	53.3	43.3
Men	1,534	1,221,442	46.7	56.7

*National Direct Student Loan, Supplemental Educational Opportunity Grant, College Work Study, and Scholarships.

APPENDIX J

ASSISTANT ACADEMIC VICE PRESIDENT

Box 3004/Las Cruces, New Mexico 88003
Telephone (505) 646-1759

NEW MEXICO STATE UNIVERSITY IS PLEASED TO ANNOUNCE

THE CRIMSON SCHOLARS

a program in preliminary stages of development for academically superior students

As *CRIMSON SCHOLARS*, students will have the opportunity to:

- *enrich their academic experiences through independent investigation, research projects, and other meaningful work experiences, all under the supervision of faculty members or other professional people in their field.*
- *plan academic study with more flexibility and freedom.*
- *satisfy degree requirements by alternative means.*
- *participate in special faculty advisement and counseling with emphasis towards professional and post-graduate studies.*
- *enroll in honors-level academic coursework.*
- *receive local and state recognition as academically superior students.*
- *receive consideration for financial support, awards, and/or other assistance.*
- *wherever possible, be provided with salaried work experiences related to their career and professional goals.*
- *receive special consideration for academic and career enrichment through research grants, publication outlets, foreign programs and exchanges, National Endowment for the Humanities Grants, honor societies, post-graduate awards, etc.*
- *interview for the Student Ambassador Program.*

Eligibility: New entering freshmen must have a minimum ACT standard composite score of 26 to apply for this academic program. Letters of recommendation, interviews, and a resume of the student's activities may be used to determine the student's qualifications for this program. For new freshman, continued participation in the *CRIMSON SCHOLARS* is contingent on maintaining a GPA of 3.3; sophomores, juniors, and seniors must maintain a minimum GPA of 3.5.

Eligibility for the *CRIMSON SCHOLARS* is dependent on the student's academic record. Minimum qualification does not guarantee acceptance as a *CRIMSON SCHOLAR*; it only denotes eligibility for application to the program.

How to Apply: Students interested in applying for the *CRIMSON SCHOLARS* should write or call Dr. Gerald M. Burke, Assistant Academic Vice President, New Mexico State University, Box 3004, Las Cruces, N. Mex., 88003; phone (505) 646-1759.

APPENDIX K

COLLEGE FRESHMAN SURVEY

The Office of Student Affairs at NMSU is conducting a survey of entering freshmen at the University. The questions range across a number of topics that will be helpful in improving the services offered to students.

Please think about each question carefully, and respond as accurately as possible. In some cases, it may be necessary to make a careful estimate. If any of the questions are objectionable, you may omit your answer to them.

The questionnaire has been coded for keypunching. Therefore, the numbering of the question may not be in numerical sequence. Answer each question by circling the appropriate alternative.

We would appreciate your responses to the survey, and thank you for your participation.

Office of Student Affairs

and

Educational Research Center

New Mexico State University

1979

C1-4 No.____

5) Your age:
   1. 17 or under
   2. 17-18
   3. 19-22
   4. 23-24
   5. 24 or older (please specify)____

6) Sex:
   1. Female
   2. Male

Ethnic background:

7) 1. Anglo-American
8) 2. Black-American
9) 3. Spanish-American
10) 4. Oriental-American
11) 5. American Indian
12) 6. Other (please specify)_____

13) How many children do you have?
   1. None
   2. One
   3. Two
   4. Three
   5. Four or more

High school major:

14) 1. College Preparatory
15) 2. Vocational
16) 3. Business Education
17) 4. General Education
18) 5. Other (please specify)_____

19) Your high school grade point average: (1.00 to 4.00 scale, A = 4.00)
   1. 19 or less
   2. 1.00 to 1.90
   3. 2.00 to 2.90
   4. 3.00 to 3.50
   5. 3.60 or higher

20) When did you first want to go to college?
   1. 12 years old or younger
   2. 13-15
   3. 16-18
   4. 19 or older

21) Military status:
   1. Non-veteran
   2. Veteran
   3. Active duty

22) Marital status:
   1. Single
   2. Married
   3. Divorced
   4. Separated

23-24) If a resident of New Mexico, please indicate the county:
   County_____

25-26) If not a U.S. citizen, please indicate your home country.
   Country_____

27) Number of brothers and sisters?
   1. None
   2. One
   3. Three-four
   4. Five or more

28) Your parent's income:
   1. $10,000 or under
   2. $10,001 - $20,000
   3. $20,001 - $30,000
   4. $30,001 - $40,000
   5. $40,001 or over

29) Father's education:
   1. Non-high school graduate
   2. High school graduate
   3. Took college classes
   4. College graduate
   5. Took graduate classes
   6. Doctoral degree

30) Mother's education:
   1. Non-high school graduate
   2. High school graduate
   3. Took college classes
   4. College graduate
   5. Took graduate classes
   6. Doctoral degree

31) Father's attitude toward college:
   1. Very Unimportant
   2. Unimportant
   3. Important
   4. Very Important

32) Mother's attitude toward college:
   1. Very Unimportant
   2. Unimportant
   3. Important
   4. Very Important

Which one influenced you the most to attend college:

33) 1. Father
34) 2. Mother
35) 3. Teacher
36) 4. Principal
37) 5. Guidance Counselor
38) 6. Brother or sister
39) 7. Friend
40) 8. Other (please specify)_____

Which post-secondary institution did you attend prior to entering NMSU?

41) 1. Vocational-Tech School
42) 2. Four year College
43) 3. Business College
44) 4. Branch College
45) 5. Community College
46) 6. Other (please specify)_____

What were the three key factors which influenced your decision to attend NMSU?

47) 1. Location
48) 2. Size of the University
49) 3. Relative attending
50) 4. Friend attending
51) 5. Parents or relatives attended
52) 6. Information from a recruiter
53) 7. Had the classes you wanted to take
54) 8. Liked the campus
55) 9. Social life
56) 10. The professors
57) 11. Athletics
58) 12. Academic reputation
59) 13. Other (please specify)_____

60) How would you describe your political views?

1. Far Left
2. Liberal
3. Middle-of-the-Road
4. Conservative
5. Far Right

Where do you plan to live?

61) 1. Parent's or relatives' home
62) 2. Private home, room, or apartment
63) 3. College dormitory
64) 4. Fraternity or Sorority house
65) 5. Other (please specify)_____

Main sources of income while attending college: (Mark all that apply)

66) 1. Parent's, relatives or gifts
67) 2. Spouse
68) 3. Your work (full-time)
69) 4. Your work (part-time)
70) 5. Loans
71) 6. Grants or scholarships
72) 7. Your savings
73) 8. G. I. benefits
74) 9. Social Security benefits
75) 10. Other (please specify)

What areas do you feel you need tutoring or remedial instruction?

76) 1. Math
77) 2. Science
78) 3. English
79) 4. Reading
80) 5. Oral Communication
81) 6. Other (please specify)_____

DUP1 - 4

C5 - 2

What is the highest degree you intend to obtain:

6) 1. None
7) 2. Associate (AA degree)
8) 3. Bachelor's
9) 4. Master's
10) 5. Doctorate
11) 6. Other (please specify)_____

Please indicate your college major:

12) 1. Arts and Sciences
13) 2. Education
14) 3. Engineering
15) 4. Business Administration and Economics
16) 5. Agriculture and Home Economics
17) 6. Human Resources
18) 7. Undecided

1. Very Unimportant
2. Unimportant
3. Important
4. Very Important

How important were the following in your decision to attend college?

19)	Able to get a good job	1	2	3	4
20)	To be a more cultured person	1	2	3	4
21)	Parents wanted me to go	1	2	3	4
22)	Meet new people	1	2	3	4
23)	Prepare for graduate or professional school	1	2	3	4
24)	Couldn't find a job	1	2	3	4
25)	To develop my knowledge	1	2	3	4
26)	To be able to make more money	1	2	3	4
27)	I was bored	1	2	3	4
28)	Learn more about things that interested me	1	2	3	4
29)	Develop my athletic abilities	1	2	3	4
30)	Wanted to get away from home	1	2	3	4
31)	Develop my philosophy of life	1	2	3	4
32)	Find someone you wanted to marry	1	2	3	4
33)	Creating original works	1	2	3	4
34)	Develop my social skills	1	2	3	4
35)	Other, please specify	1	2	3	4

APPENDIX L

OUT-OF-STATE INSTITUTIONS OFFERING PROGRAMS IN NEW MEXICO
A Partial List

1. Arizona Tech, Phoenix, Arizona
2. Art Instruction Schools, Minneapolis, Minnesota
3. Automation and Training Universal
4. Berean School of Divinity, Wichita, Kansas
5. Chapman College, Orange, California
6. College of St. Francis, Joliet, Illinois
7. Denver Institute of Technology
8. East Tennessee State University, Johnson City, Tennessee
9. Eckerd College, St. Petersburg, Florida
10. Famous Schools (art), Westport, Connecticut
11. Franklin Pierce College, Concord, New Hampshire
12. Lamson Business College, Tucson, Arizona
13. LaSalle Extension University, Chicago, Illinois
14. La Verne College, La Verne, California
15. Nova University, Fort Lauderdale, Florida
16. Park College, Parkville, Missouri
17. Parks College, Denver, Colorado
18. Pepperdine University, Malibu, California and Los Angeles, California
19. Southwest Business College, Plainview, Texas
20. Stephens College Without Walls, Columbia, Missouri
21. United States International University, San Diego, California
22. Webster College, St. Louis, Missouri

Source: Board of Educational Finance, Directory of New Mexico Private Proprietary Schools for Fiscal Year 1978-79 (Santa Fe, New Mexico: 1979).

APPENDIX M

New Mexico State University
Instruction and General Funding
And Research Grants and Contracts

Year	I&G	RESEARCH				
		Federal	State	Private	Other	Total
1973-74	$16,999,634	$ 9,313,795 0.548	$1,845,976 0.109	-	-	$13,267,314 0.780
1974-75	20,418,211	8,444,332 0.414	3,013,459 0.148	$420,193 0.021	$1,280,918 0.063	13,158,902 0.644
1975-76	23,270,722	10,411,698 0.447	2,886,320 0.124	463,492 0.020	1,789,812 0.077	15,551,322 0.668
1976-77	26,763,537	11,257,942 0.421	3,245,570 0.121	525,906 0.020	1,358,030 0.051	16,387,448 0.612
1977-78	30,312,313	14,355,003 0.474	4,284,500 0.141	500,000 0.016	1,557,418 0.051	20,696,921 0.683
1978-79	34,179,134	15,661,643 0.458	4,284,900 0.125	609,600 0.018	1,550,059 0.045	22,106,202 0.647

APPENDIX N

CONSTRAINTS ON RESEARCH GROWTH AS SEEN BY STAFF AT NMSU RESEARCH CENTERS

The constraints on increasing the relative support for research are common to all colleges:

a. Lack of space

b. Outdated facilities and equipment

c. Use of overhead funds

d. Use of released time

e. Lack of risk support

The current policy on the use of released time requires hiring visiting faculty to replace the teaching of the regular faculty involved in funded research. Office space for the visiting faculty is quite limited and sometimes nonexistent. This policy also affects the effectiveness of teaching which in smaller departments creates a problem of a major portion of teaching being done by visiting faculty. The facilities and equipment are insufficient and outdated for current research. Better equipment may be needed to attract more research. Current distribution and use of overhead funds is considered a constraint on growth by some of the colleges. Growth of an individual department by expansion of research involves a risk in case of a sudden drop in research funding. Current funding policies do not provide any support in case of such contingencies.